

Bacterial infection

37B-B3

عناوين الحياه



Bacterial infection

Impetigo

Diagnosis: Impetigo contagiosum(non bullous)

Casuses:bacteria:(mainly staph+ strept)

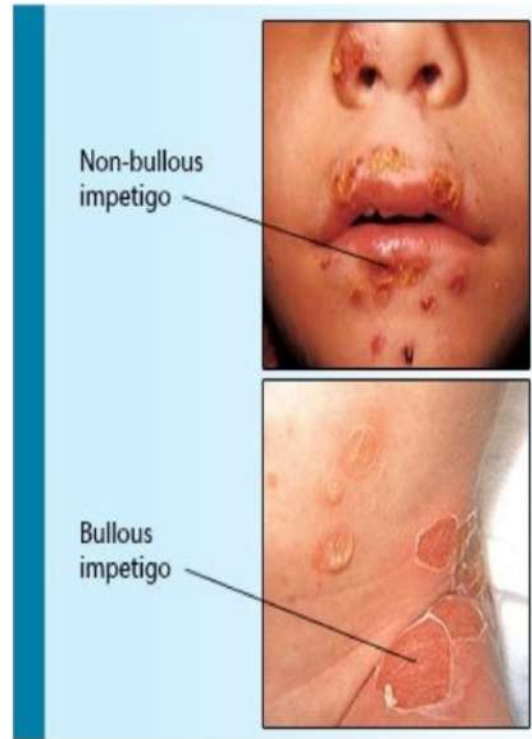
Lesion :PRY (thin wall **vesicle** with erythematous)

2nd(dry golden yellow **crust**)



Figure 25-8. Impetigo: MSSA Crusted erythematous erosions becoming confluent on the nose, cheek, lips, and chin in a child with nasal carriage of *S. aureus* and mild facial eczema.

IMPETIGO



Impetigo

Diagnosis: bullous impetigo

Casuses: bacteria: (staph phage || type 71)

Lesion : **PRY** (fragile fluid filled flaccid **bull**a surrounding by rim erythema)

2nd (**crust** or **erosion**)

Circinate Lesion (central healing and peripheral extension)



Figure 25-12. Bullous impetigo Scattered, discrete, intact, and ruptured thin-walled blisters on the inguinal area and adjacent thigh of a child; lesions in the groin have ruptured, resulting in superficial erosions.



Figure 25-13. Bullous impetigo with blistering dactylitis: *S. aureus* A large, single bulla with surrounding erythema and edema on the thumb of a child; the bulla has ruptured and clear serum exudes.



Impetigo

Diagnosis: ecthyma (ulcerative Impetigo)

Casuses: bacteria: (staph+ mainly strept)

Lesion : PRY (vesicle or pustules erythematous)

Rupture

2nd (ulcer topped by hard dry crust (removal crust leave saucer shaped ulcer surround by red margins)



Figure 25-29. *Ecthyma gangrenosum* of buttock: *P. aeruginosa* A 30-year-old male with HIV disease and neutropenia. **(A)** An extremely painful, infarcted area with surrounding erythema present for 5 days. This primary cutaneous infection was associated with bacteremia. **(B)** Two weeks later, the lesion had progressed to a large ulceration. The patient died 3 months later of *P. aeruginosa* pneumonitis associated with chronic neutropenia.

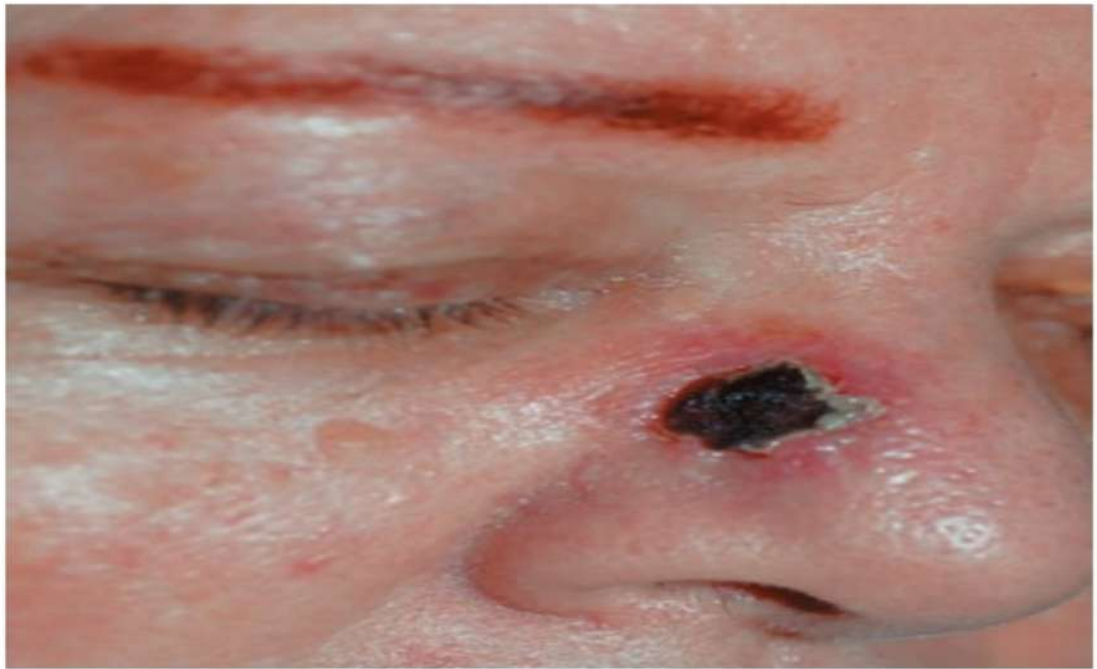


Figure 25-14. Ecthyma: MSSA Thickly crusted erosion/ulcer on the nose had been present for 6 weeks, arising at the site of a small wound. The crust was adherent and the site bled with debridement.

ECTHYMA



Folliculitis Superficial

Diagnosis: Acute superficial Folliculitis (bockhart's Impetigo)

Casuses: bacteria(staph)

Lesion : **PRY** (dome -shaped **pustules** pirced by hair on orifices)

Healing : No scar



superficial folliculitis



Figure 31-25. Infectious folliculitis, superficial in axilla: MRSA A 25-year-old male with pruritic and tender axillary lesions for several weeks. Multiple follicular pustules and papules are seen in the vault of the shaved axilla. Shaving facilitates entry of *S. aureus* into the superficial hair follicle. The lesions resolved with minocycline.



Figure 31-26. Infectious folliculitis on forearm A 44-year-old male with HIV/AIDS and numerous pustules and papules with superimposed mild lichen simplex chronicus.

Folliculitis (Superficial)

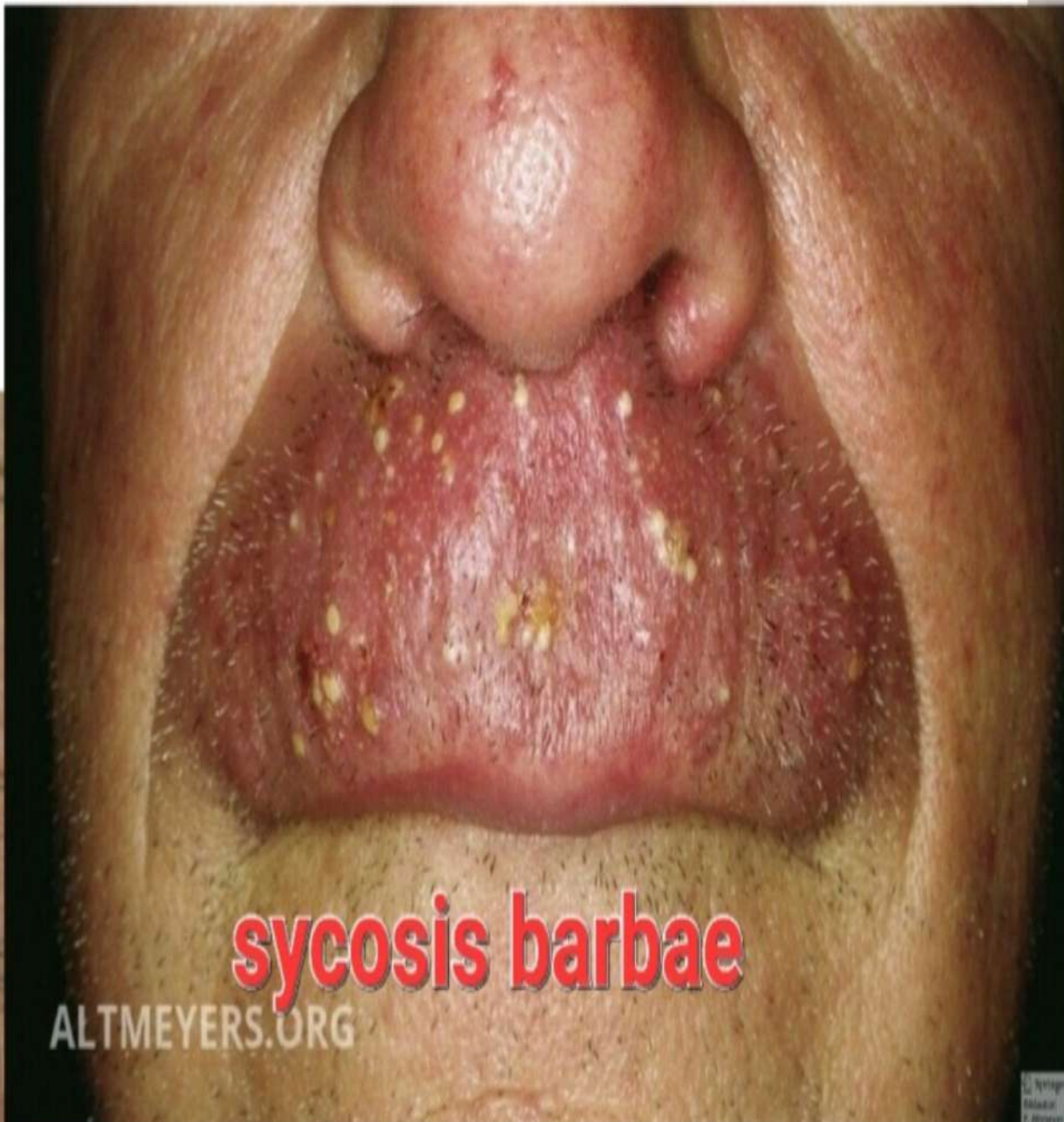
Diagnosis: sycosis barbae

Casuses: bacteria(staph)

Lesion : **PRY** (erythematous and edematous papules or pustule may palque with pustule)

Healing : no or rare scar

DD: pseudofolliculitis barbae - Tinea barbae



sycosis barbae

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Folliculitis (acute deep)

Diagnosis: Boil (fruncle)

Casuses: bacteria

Lesion : PRY (firstly red skin → tender papule → white pus collect under skin) become abcess if spread to deep tissue.

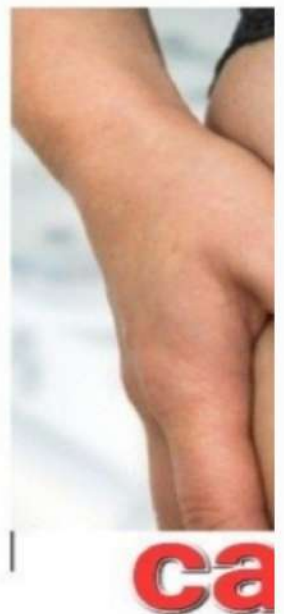




Figure 25-16. Furuncle: MSSA Abscess on the medial thigh of a 52-year-old male. The lesion was incised and drained and treated with doxycycline.



Figure 25-18. Multiple furuncles on the abdomen: MRSA 66-year-old operating room technician with multiple painful nodules. MRSA was isolated on culture of the nares and an abscess. He was treated with doxycycline, mupirocin to nares, and bleach baths. He was restricted from returning to work until cultured sites were negative for *S. aureus* colonization.



Figure 25-19. Multiple furuncles: MRSA Multiple painful nodules on the buttocks of a 44-year-old male with HIV disease.

Folliculitis (acute deep)

Diagnosis: carbuncle

Casuses: bacteria(staph) affects patients with D.M and immunecompromised.

Lesion :PRY (red swollen painful cluster of Boil under skin)



carbuncle



Figure 25-21. Carbuncle: MSSA A very large, inflammatory plaque studded with pus-tules, draining pus, on the nape of the neck. Infection extends down to the fascia and has formed from a confluence of many furuncles.

Folliculitis (chronic deep)

Diagnosis: pseudofolliculitis barbae

Casuses: Non infections (foreign body inflammation)

Lesion : PRY (red or hyperpigment papules or pustule)

N.B if pustules may causes staph

DD: pseudofolliculitis barbae - Tinea barbae



Figure 31-22. Pseudofolliculitis barbae A 29-year-old black male with multiple follicular papular scars in the beard; the presence of follicular pustules usually indicates secondary *Staphylococcus aureus* folliculitis. Folliculitis keloidalis is often seen on the occipital scalp and neck (see Fig. 31-21).



pseudofolliculitis barbae

Folliculitis (chronic deep)

Diagnosis: Acne keloidalis nuchae

Casuses: foreign body or chronic bacteria or autoimmune

Lesion: PRY (keloid like papules ,plaque ,pustule)

N.B if pustules may causes staph

• Inflammation of hair Follicule + fibrosis of tissue = scarring

Acne-keloidalis-nuchae

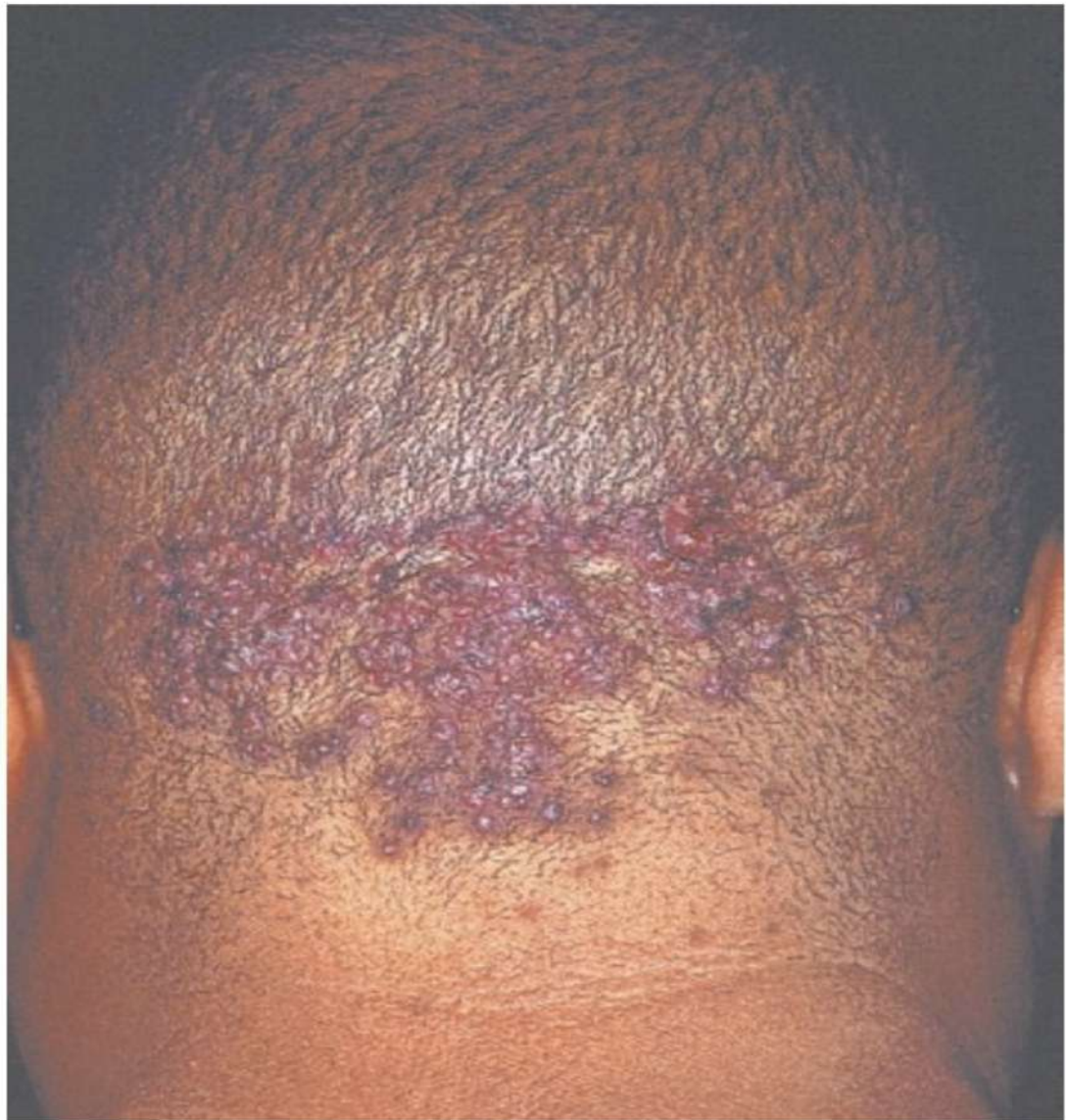


Figure 31-21. Scarring alopecia of scalp: folliculitis keloidalis A 31-year-old black male with papular scars of 3 years' duration, and follicular pustules becoming confluent on the occipital scalp and neck.

Cellulitis

Diagnosis: cellulitis

Casuses: bacteria: (staph+mainly strept)

Lesion : **PRY** (red pain hot swollen tender ill or well demarcated Lesion.. may **vesicle** or **bullae**)

cellulitis



Figure 25-23. Cellulitis at portal of entry: MSSA 51-year-old male with interdigital tinea pedis noted pain on the dorsum of his foot. KOH preparation was positive for dermatophytic hyphae. Methicillin-sensitive *S. aureus* was isolated on culture of the webspace.



Figure 25-24. Cellulitis lower leg: MRSA
70-year-old obese male with chronic venous stasis and stasis ulcer had increasing erythema and blister formation of the lower leg associated with fever.



Figure 25-25. Recurrent cellulitis of the arm with chronic lymphedema: MSSA
Right breast cancer had been treated with mastectomy and lymph node excision 10 years previously. Lymphedema of the right arm followed. Hand dermatitis was secondarily infected with MSSA. Cellulitis occurred repeatedly in the setting of chronic lymphedema.

Erysiplas

Diagnosis: erysiplas

Casuses: bacteria:(strept)

Lesion : PRY (well-defined? raised border. The affected skin is red, firm, swollen and may be finely dimpled like an orange skin.)

In face take butterfly appearance.

ERYSIPELAS





Figure 25-27. Erysipelas of face: group A streptococcus Painful, well-defined, shiny, erythematous, edematous plaques involving the central face of an otherwise healthy male. On palpation, the skin is hot and tender.

Figure 25-28. Erysipeloid of hand A well demarcated, violaceous, cellulitic plaque (without epidermal changes of scale or vesiculation) on the dorsa of the hand and fingers, occurred following cleaning fish; the site was somewhat painful, tender, and warm.



Intertrigo

Diagnosis: intertrigo

Casuses: bacteria:(strept+ contact dermatitis + fungi)

Lesion : PRY (early slight maceration and erythema → ↑ redness and epidermal denuded inflammation → exudation of serous fluid)



Figure 25-5. Intergluteal intertrigo: group A streptococcus A painful moist erythematous plaque in a male with intertriginous psoriasis, with foul odor. Infection resolved with penicillin VK.



Figure 25-7. Webspace intertrigo: *P. aeruginosa* Erosion of a webspace of the foot with a bright red base and surrounding erythema. Tinea pedis (interdigital and moccasin patterns) and hyperhidrosis were also present, which facilitated growth of *Pseudomonas*.

Erythrasma (patch scaly)

Diagnosis: erythrasma

Casuses: bacteria: (corynebacterium minutissimum)

Lesion : PRY (slowly enlarging area sharply demarcated patches of erythrasma are initially pink,)

2nd (progress quickly to become brown and scaly)

N.B Exposure to long-wave ultraviolet radiation (e a. Wood's light) causes the erythrasma to fluoresce a coral-pink color due to porphyrins released by the bacteria.



Figure 25-1. Erythrasma: axilla Sharply marginated, red patch in the axilla. Wood's lamp demonstrates bright coral-red, differentiating erythrasma from intertriginous psoriasis. KOH preparation was negative for hyphae.



Figure 25-2. Erythrasma: webspace This macerated interdigital webspace appeared bright coral-red when examined with Wood's lamp; KOH preparation was negative for hyphae. The webspace is the most common site for erythrasma in temperate climates. In some cases, interdigital tinea pedis and/or pseudomonal intertrigo may coexist.

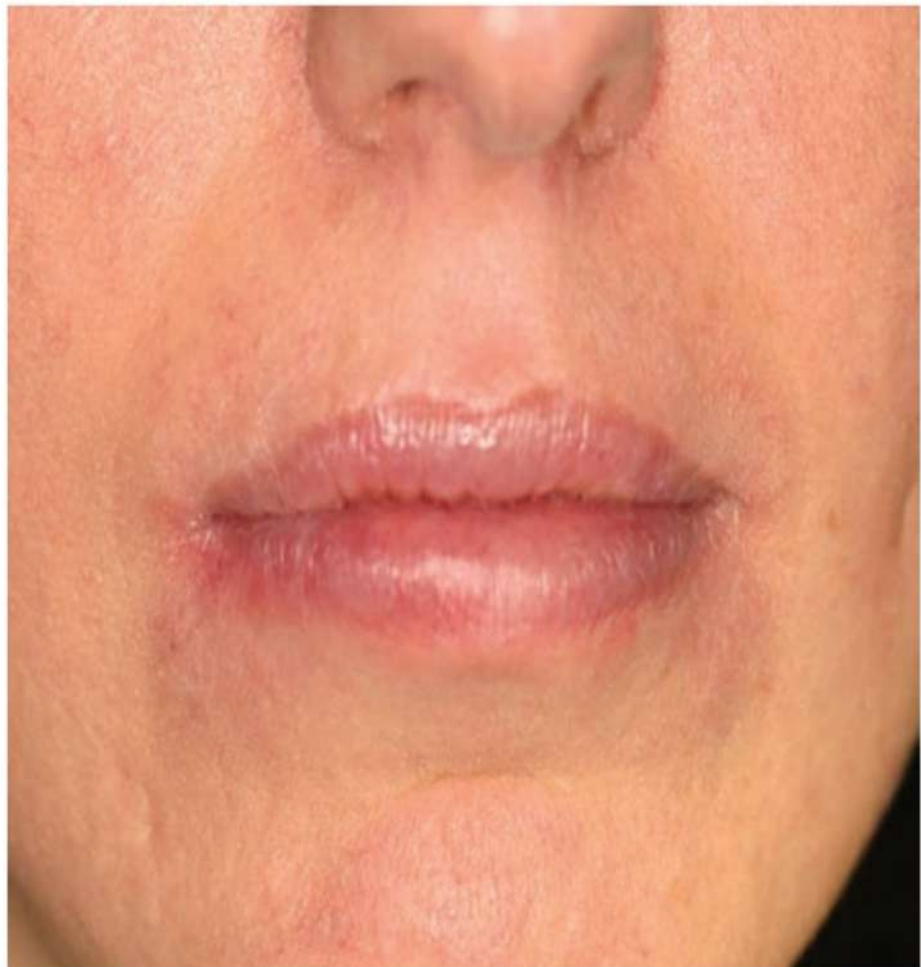
Angular cheilitis

Diagnosis: perleche(angular cheilitis)

Casuses:bacteria:(strept + fungi)

Lesion : (inflammation of angle of mouth) Crack-fissure -moist area around mouth -erythematous.

Figure 33-1. Angular cheilitis Mild erythema and scaling in bilateral commissures. (Courtesy of Dr. Nathaniel Treister.)



Paronychia

Diagnosis: Acute paronychia

Casuses: bacteria: (strept+ staph)

Lesion Affected digit - red -swollen
Throbbing painful -draining pus.

Acute = Bacteria + child
Chronic = fungi + adult + women



Figure 32-17. Acute paronychia The proximal nail fold is red and edematous (cellulitis) with pus formation.

Abcess

Diagnosis: Abcess

Casuses: bacteria + parasite+ foreign body

Lesion : PRY (-red swollen -

-Superficial pustules (boil)

-Or deep skin abcess



Figure 25-15. Abscess: MSSA A very tender abscess with surrounding erythema on the heel. The patient was a diabetic patient with sensory neuropathy; puncture by a sewing needle that was imbedded in the heel had provided a portal of entry. The foreign body was removed surgically.

Treatment of impetigo:

1. Treatment of any predisposing factor. If scabies and pediculosis are present, they should be treated as soon as impetigo is successfully treated.
2. Topical treatment:
 - Warm olive oil or potassium permanganate 1/8000 soaks to remove crusts.
 - Topical antibiotics, e.g. fusidic acid cream (Fucidin[®]), or mupirocin 2%.
3. Systemic antibiotic treatment, e.g. oral azithromycin (Zithromax[®]) for 5 days, or oral cephalexin (Keflex[®]) for 10 days, is indicated if infection is generalized, associated with fever or lymphadenopathy, and in case of bullous impetigo.

Treatment of ecthyma:

1. Treatment of any predisposing factor.
2. Topical treatment:
 - Warm olive oil or potassium permanganate 1/8000 soaks to remove the crust.
 - Topical antibiotics, e.g. fusidic acid cream (Fucidin[®]), or mupirocin 2%.
3. Systemic antibiotic treatment, e.g. oral azithromycin (Zithromax[®]) for 5 days, or amoxicillin/clavulonate (Augmentin[®], or Klavox[®]), or oral cephalexin for 10-14 days.

Treatment of Bockhart's impetigo:

1. Treatment of any predisposing factor.
2. Topical antibiotics, e.g. fusidic acid cream (Fucidin[®]), or mupirocin 2% (Bactroban[®]).
3. Systemic antibiotic treatment for extensive lesions.

Treatment of sycosis barbae:

1. Treatment of any predisposing factor, e.g. shaving with a clean razor.
2. Topical antibiotics, e.g. fusidic acid cream (Fucidin[®]), or mupirocin 2% (Bactroban[®]).
3. Systemic antibiotic treatment for severe/resistant cases.

The primary treatments for boils and carbuncles include hot packs and draining (lancing) the abscess but only when it is soft and ready to drain. Systemic antibiotics may be given for extensive or recurrent lesions.

Treatment of bacterial intertrigo:

1. Frequent washing with potassium permanganate 1/8000, 4 times/day.
2. Topical antibiotic/steroid cream, e.g. gentazone[®], or fusicort[®].

Treatment of erythrasma:

1. Topical fusidic acid, Whitfield's ointment, clindamycin solution, or topical imidazoles.
2. Extensive infection can be treated with erythromycin, azithromycin, or tetracycline and usually responds promptly.
3. Antibacterial soap can be used to prevent recurrence.

Treatment of angular cheilitis

1. Correction of any predisposing factor.
2. Topical antibiotic and/or antifungal cream.
3. Vitamin B complex.

Antibiotic

Treatment of abscess:

Unlike other infections, antibiotics alone will not usually cure an abscess. In general an abscess must open and drain in order for it to improve.

1. Surgical incision and drainage (I&D).
2. As *S. aureus* bacteria is a common cause, an antibiotic as flucloxacillin or dicloxacillin is used. Methicillin-resistant *S. aureus* (MRSA), can be treated by alternative antibiotics, e.g. clindamycin, trimethoprim-sulfamethoxazole, and doxycycline.
3. Primary closure is successful when combined with curettage and antibiotics or with curettage alone.